

Space Science Seminar
Tuesday, 2015 May 12
10:30 a.m.
NSSTC/2096

**Terrestrial Gamma Flashes Observed from
Nearby Thunderstorms at Ground Level**

Dr. Michael Cherry, Chair/Physics and Astronomy, Louisiana State University
Host: Dr. Nasser Barghouty (sponsored by ZP12)

The TGF and Energetic Thunderstorm Rooftop Array (TETRA) is an array of NaI scintillators located on the campus of Louisiana State University in Baton Rouge. Since July 2010, TETRA has detected 37 millisecond bursts of gamma rays at energies 50 keV – 2 MeV associated with nearby (< 5 km) thunderstorms. The ability to observe ground-level Terrestrial Gamma Flashes from close to the source allows a unique analysis of the storm cells producing these events. Results from radar images of storms at the time of TGFs suggest a connection between the currents from the showers that produce the TGFs and the thunderstorm structure. A description of the observations, the results of the analysis, and plans for a future TETRA-II array will be presented.

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